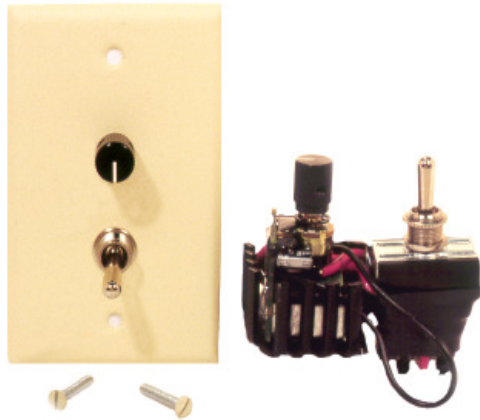


# Variable Speed DC Fan Control

## An All-in-one System for Optimal Air Delivery



**H**ave it all your way with the ZANE DC Fan Speed Control: Air delivery adjustable between a gentle breeze and a cooling stream, lower overall energy draw, and reduced acoustical noise. When operating a fan for extended periods between battery recharges, why use anything else?

With this ZANE Fan Speed Control, blade speed is continuously variable between complete stop and full speed, while blade direction is reversible to either circulate air during summer months (down), or destratify air during winter (up).

An efficiency of 97 percent at all speeds and direction dramatically minimizes battery drain, while about 99 percent of battery voltage is delivered to the fan at full setting for a maximum fan performance that truly equals a toggle switch. A center-off switch position allows easy duplication of an optimal speed setting. Tactile on/off knob position is included.

Ruggedized, high quality construction means reliability you can count on under adverse electrical and environmental conditions. Capacitive silencing reduces motor hum to the vanishing point, while double filtering

dampens radio interference to the nil-to-none range. An included activation wire allows the fan to be on/off switched by the contacts of a standard wall thermostat at a few milliamperes, for example, to deactivate the fan as night temperatures fall, and reactivate the fan once again as day temperatures rise.

12V versions are available at your choice of either 1.5 or 2.5 amps rated capacity, while the 24V version is rated for 1.5 amps. A Voltage Doubler module can be included for operating a 24V fan from a 12V battery source. The reversing switch can be eliminated if unneeded (see table, reverse side).

Installation into a standard outlet box only takes about 10 minutes using common hand tools.

A resealable clamshell package can be included for counter sales. Transparent front label with supersized text lists key electrical ratings and displays package contents. Accessible control knob lets customer evaluate quality feel and smooth rotary action. Rear text panels highlight applications and benefits.

## Features

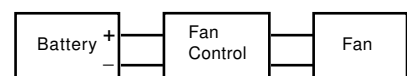
- Full range speed control with tactile on/off
- Blade reversal for summer and winter use
- Silencing capacitor delivers truly quiet operation
- Nil radio interference
- 12V or 24V operation
- Easy installation

## Applications

- Adjust ceiling or portable fan anywhere between a gentle breeze and a cooling stream. Reverse blade rotation to best circulate/destratify air during summer and winter months
- Turn up an exhaust fan located over a stove, counter, or sink to vent air fast, then down for a comfortable air exchange. Reverse blade direction to draw in cool night air
- Use on/off activation wire and a thermostat to automatically disable and enable fan as temperatures change over the course of a day

Pat Pend  
Made in USA

### Wiring Diagram



# Technical Specifications

## Mode of Operation

Continuously variable, pulse width modulation

## Supply Voltage

12V Version: 8 to 20 vdc working, up to 32 vdc momentary.

24V Version: 18 to 30 vdc working, up to 40 vdc momentary.

Unit must be fused at electrical box. Turn unit off during battery equalization of some inverters to avoid life-shortening overvoltage.

Battery or filtered dc only. Fuse or breaker in electrical box

## Output Voltage Range

From zero vdc to essentially supply voltage

## Continuous Output Current

Full rated current up to 105 F (40 C) ambient, 75% of rated current up to 115 F (46 C)

## Ambient Temperature Range

- 40 F (- 40 C) to 115 F (46 C) (with restrictions noted)

## DC-DC Conversion Efficiency

About 97% at full setting

## Load Types

Optimized for fans

## Reverse Polarity Protection

Power can be reverse connected across the input leads for a short period without damage. Fuse link on rear of circuit board blows if power is connected across negative leads

## Forward Transient Protection

Double resistive/capacitive filtering, zener diode clamping

## Size

Sized to fit a standard 1-gang outlet box

## Weight

From 3 to about 5 oz (84 to 140 gm) depending on options

## Load Regulation

At a given setting a relatively constant voltage (within about 3%) is delivered to the motor under full load

## Line Regulation

Directly proportional to supply voltage

## Voltage Drift

Nil with steady input voltage

## Power Dissipation of Drive Circuitry

Nominally about 0.038W. Nil current used in click-off position

## Service Life of on/off Switch

About 50,000 cycles

## Heat Sink

Heat sink is electrically isolated from voltage and acts as an open frame circuit enclosure. Temperature rise under maximum load is about 40 F (22 C) above ambient

## Accessories Included

Color coordinated switch plate mounting screws and detailed installation instructions

## Safety Construction

Conforms with ANSI-12V Standards

## Warranty and Disclaimer:

Although Manufacturer warrants the goods, so far as the same are of its manufacturer, against defects in materials and workmanship under normal use and service for which they were designed for a period of 90 days after invoice date, Manufacturer's obligation under this warranty are limited, at its option, to the replacement of the part or parts determined to be defective or to the refund of the purchase price.

Claims made in this data sheet are based on extensive testing and are believed to be true. Manufacturer shall under no circumstances be liable for any special, indirect, incidental, or consequential damages owing to failure of the goods. Manufacturer makes no warranty of fitness for a particular purpose or merchantability or any other warranty, oral or written, expressed or implied, except as specifically set forth herein.

Do not use ZANE products as critical components in life support devices or systems, aircraft, or other hazardous applications. Quotation, order acknowledgment, purchase, etc. does not grant or imply a license under any present or future patents owned by seller except to extent purchases are made from seller.

Any goods returned under warranty must be returned freight prepaid to ZANE International Inc., Minden, NV.

### Variable Speed Fan Control for Outlet Box Installation

Part #	UPC Number	Input Voltage	Maximum Current
AFN-44L-12V	09800	12V	1 1/2A
AFN-44L-NR-12V (same but no reversing)	09807		
AFN-44L-24V	09900	24V	1 1/2A
AFN-44L-NR-24V (same but no reversing)	09907		
AFN-48L-12V	10000	12V	2 1/2A
AFN-48L-NR-12V (same but no reversing)	10007		
AFN-44L-VD-24V	09906	12V	1 1/2A
Includes Voltage Doubler Module, on 2-gang wall plate			
AFN-44L-NRVD-24V (same but no reversing)	09981		